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# बारबेल सेट — विशिष्टि

( पहला पुनरीक्षण )

## Barbell Set — Specification

( *First Revision* )

ICS 97.220.30

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## FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Sports Goods Sectional Committee had been approved by the Production and General Engineering Division Council.

As the performance of a weight lifter is dependent largely on the equipment he uses and the equipment that is made available in competitions, formulation of a national standard was considered very essential.

This standard was first published in 1968. This revision has been taken up to keep pace with the latest technological developments, international practices, and technical rules and regulations of the International Weightlifting Federation. In this revision, the following major changes have been made:

- a) Collar specifications are incorporated;
- b) Requirements of discs have been updated;
- c) Performance test method has been updated; and
- d) Specifications for barbell set for women are incorporated.

The composition of the Committee, responsible for the formulation of this standard is given at Annex A.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

# *Indian Standard*

## BARBELL SET — SPECIFICATION

### ( *First Revision* )

#### 1 SCOPE

This standard covers the requirements for barbell set used in a weightlifting competition.

#### 2 REQUIREMENTS

The barbell set consists of the following parts:

##### 2.1 Bars

**2.1.1** The bars shall be made from chromed steel, machined with knurling in grip section and capable of satisfying the performance test given in 4. The bars are further classified as given below:

- a) Men Bar, weight  $20 \text{ kg}^{+0.10}_{-0.05}$  percent; and
- b) Women Bar, weight  $15 \text{ kg}^{+0.10}_{-0.05}$  percent.

**2.1.2** Dimensions for the men's bar shall be as given in Fig. 1 and the dimensions for the women's bar shall be as given in Fig. 2. Tolerances on dimensions for both men and women bar shall be  $^{+0.10}_{-0.05}$  percent.

##### 2.2 Discs

**2.2.1** The discs can be made from mild steel, plastics, or cast iron. Discs having weight of more than 10 kg shall be covered with rubber or plastics. Discs are classified as competition discs and training discs. The discs shall conform to the requirements as mentioned in Table 1. Both sides of the discs shall be coated with a permanent colour.

**2.2.2** The competition discs shall be coloured wholly on both the sides as per column 5 of Table 1.

**2.2.3** Training discs shall be either coloured wholly with the corresponding colour as given in column 5 of Table 1 or full black colour with a rim of the corresponding colour as per column 5 of Table 1, and marked as 'Training'.

**2.2.4** The tolerances on the weight of competition discs shall be as given in Table 1 whereas the tolerances on the weight of training discs shall be  $\pm 0.8$  percent.

##### 2.3 Collar

For holding the discs on the bar, each bar shall be equipped with two collars. The collar shall be made from chromed steel. The collars shall meet the requirements as given in Table 2.

#### 3 WORKMANSHIP AND FINISH

The bar shall be comfortable to hold in hands and the discs shall be free from casting defects. All the sharp edges shall be rounded off. The chromed plating shall be free from pin-holes, cracks, and such other defects which may impair its serviceability.

#### 4 PERFORMANCE TEST

The bar with all the discs in position, weighing approximately 190 kg shall be lifted to a height of 2.5 metres and dropped free on the ground normally used for weight lifting. After completion of the test, the bar or any disc shall show no sign of cracking or permanent deformation.

#### 5 PACKING AND MARKING

##### 5.1 Packing

The barbell set shall be packed as agreed to between the purchaser and the supplier.

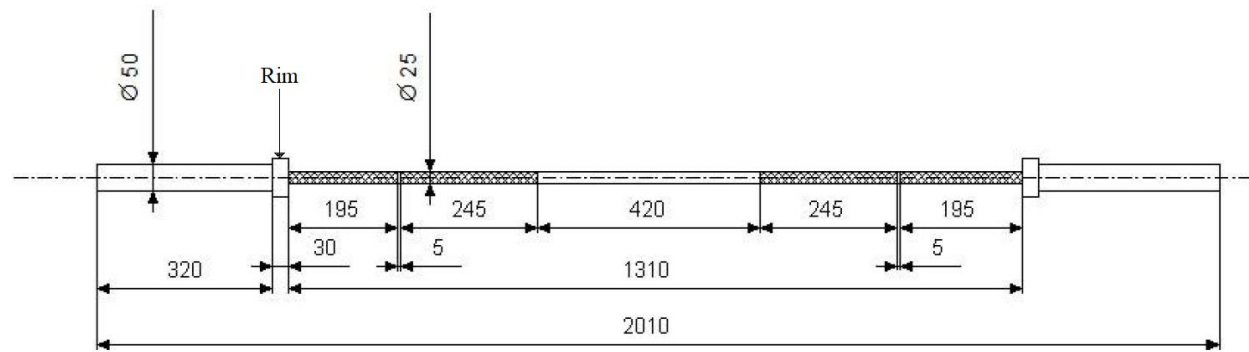
##### 5.2 Marking

**5.2.1** Each bar and disc/package shall be marked with the followings:

- a) Manufacturer's name;
- b) Identification mark or registered trade-mark; and
- c) Marked with its weight in kilograms.

##### 5.2.2 BIS Certification Mark

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the products may be marked with the Standard Mark.



**Table 1 Requirement of Discs**  
(Clause 2.2)

Sl No.	Item	Weight, kg	Tolerance on Weight	Colour of Disc	Width, mm, <i>Max</i>	Diameter, mm	Tolerance on Diameter, mm
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
i)	Disc	25	$\left. \begin{array}{l} +0.10 \\ -0.05 \end{array} \right\}$ Percent	Red	67	450	$\pm 1$
ii)	Disc	20		Blue	54		
iii)	Disc	15		Yellow	43		
iv)	Disc	10		Green	35		
v)	Disc	5		White	26.5	230-260	
vi)	Disc	2.5	$\left. \begin{array}{l} + 10 \\ - 0 \end{array} \right\}$ g	Red	23	190-220	
vii)	Disc	2		Blue	22	155-193	
viii)	Disc	1.5		Yellow	20	139-175	
ix)	Disc	1		Green	19	118-160	
x)	Disc	0.5		White	16	97-137	

**Table 2 Requirement of Collar**  
(Clause 2.3)

Sl No.	Requirement	Tolerance
(1)	(2)	(3)
i)	Weight, 2.5 kg each	$\left. \begin{array}{l} + 10 \\ - 0 \end{array} \right\}$ g
ii)	Diameter of the hole, 50 mm	+0.10
iii)	Width, 70 mm, <i>Max</i>	$\left. \begin{array}{l} -0.05 \end{array} \right\}$ Percent

**ANNEX A**  
(Foreword)

**COMMITTEE COMPOSITION**

Sports Goods Sectional Committee, PGD 41

<i>Organization</i>	<i>Representative(s)</i>
Sports Goods Export Promotion Council	SHRI TARUN DEWAN ( <i>Chairman</i> )
All India Lawn Tennis Association, New Delhi	SHRI NAR SINGH
Anand and Anand	SHRI ASHISH ANAND
Athletic Federation of India	SHRI SANDEEP MEHTA SHRI GOPALA KRISHNAN ( <i>Alternate</i> )
Central Institute of Plastics Engineering & Technology (CIPET), Murthal COSCO India Pvt Ltd, Gurgaon	DR S N YADAV SHRI PANKAJ JAIN SHRI NARINDER JAIN ( <i>Alternate</i> )
Director Equipment, Sports Authority of India, New Delhi	SHRI ROQUE DIAS
Freewill Sports Pvt Ltd., Jalandhar	SHRI RAJESH KHARBANDA
Government e Market Place, New Delhi	SHRI N K MALHOTRA
Gymnastic Federation of India, Mumbai	SHRI RIAZ BHATI
Hockey India	COMMANDER R K SRIVASTAVA
Micro, Small and Medium Enterprises, Technology Development Centre, New Delhi	SHRI V K SINGH
NELCO (India) Pvt Ltd, Meerut	SHRI AMBER ANAND
Office of Development Commissioner (MSME), Delhi	SHRI SUNIL GUPTA
Premier Enterprises, Meerut	SHRI SUMESH AGARWAL SHRI KSHITIJ AGARWAL ( <i>Alternate</i> )
Process cum Product Development Centre, Meerut	SHRI SUNIL GUPTA
Ranson Sports Industry, Jalandhar	SHRI ARVIND SINGH RANA
Sanspareils Greenlands Pvt Ltd.	SHRI PUNEET ANAND SHRI ALOK MISHRA ( <i>Alternate</i> )
Shriram Institute For Industrial Research, Delhi	DR VINAY TYAGI

<i>Organization</i>	<i>Representative(s)</i>
Soccer International Pvt Ltd. Jalandhar	MS SHAALINI GUPTA
Softball Association of India	MS SHIBANI TAGORE
Sports Goods Manufacturers and Exporters Association (SGMEA), Jalandhar	MS HARSHITA
Sports Line, New Delhi	SHRI OJASVI NAGPAL
Stag International Sports, Meerut	SHRI RAKESH KOHLI SHRI VIVEK KOHLI ( <i>Alternate</i> )
Universal Sports, Jalandhar	SHRI MAHESH CHADHA
Vats Sports, Meerut	SHRI LOKESH VATS
Voluntary Organisation in Interest of Consumer Education (VOICE), New Delhi	SHRI M A U KHAN
Director General, BIS	SHRI R R SINGH, SCIENTIST 'E', DIRECTOR AND HEAD (PGD) [REPRESENTING DIRECTOR GENERAL ( <i>Ex-officio</i> )]

*Member Secretary*  
SHRI AJAY KUMAR  
ASSISTANT DIRECTOR AND SCIENTIST 'B' (PGD), BIS







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Review of Indian Standards

## Review of Indian Standards

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### Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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